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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,595	11/20/2001	Yoshikazu Kakura	8042-1006	8928

466 7590 02/21/2007
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EXAMINER

FERRIS, DERRICK W

ART UNIT	PAPER NUMBER
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2616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.		Applicant(s)	
	09/988,595		KAKURA, YOSHIKAZU	
	Examiner		Art Unit	
	Derrick W. Ferris		2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-21, 23 and 26 is/are rejected.
- 7) ☒ Claim(s) 22, 24 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. This Office action is in response to applicant's paper filed 12/01/2005. **Claims 18-26** newly added.
2. Examiner **withdraws** the objection(s) to the specification. Examiner thanks applicant for making the necessary corrections.
3. Examiner **withdraws** the objection to the IDS. As such, the current IDS form filed 12/01/05 has been considered.
4. Examiner **withdraws** the anticipated rejection to *Walton* and obviousness rejections to *Walton* in view of *Leung* and *Walton* in view of *Moulsley*. The following comments fully address applicant's arguments with respect to the rejection. Applicant's canceled the claims rendering the rejection(s) moot. However, the examiner respectfully disagrees with applicant's arguments. *In particular, the examiner notes that any limitations not contained within another set of independent claims is obvious based on applicant's implicit admission of leaving out said limitation in the other independent claims (i.e., no restriction is made due to obvious variations such that applicant should have filed a restriction if there were no obvious variations).*

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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6. **Claims 21 and 23** is rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,859,444 B1 to *Vancraeynest*.

As to **claim 21**, see e.g., FIG. 1B of *Vancraeynest*. A first base station is taught as RP1 214 and a second base station is taught as RP2 215. A first communication area is 212, a second communication area is 213 and an overlapping area is further illustrated in the figure between the areas. A first one of said terminals is taught as PSA 216 located within the overlapping region and a second one of said terminals is taught as PSB 217 located within the second region 213. As such, the first one of said terminals (PSA 216) communicates with said first base station (RP1 214) only in first time slots ($t_3 - 213$) and communicates with said second base station (RP2 215) only in second time slots ($t_2 - 232$) different from the first time slots ($t_3 - 213$), and wherein the second one of said terminals communicates with the second base station (RP2 215) in the first time slots ($t_3 - 233$). In particular, note that the mapping of a frame such as frame 228 contains four time slots: t_0 , t_1 , t_2 and t_3 . As such, each user in the figure communicates on the last time slot t_3 for their respective base station. See also column 6 with emphasis at lines 26-53.

As to **claim 23**, see similar rejection to claim 21. In addition, thresholds are based on handoff such that PSa 216 will have a lower quality for a threshold for originating base station RP1 212 then base station RP2 such that a second threshold is greater than a first threshold, see e.g., column 2, lines 16-44.

Claim Rejections - 35 USC § 103

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7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 18, 19, 20 and 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,859,444 B1 to *Vancraeynest* in view of U.S. Patent No. 6,493,331 B1 to *Walton et al.* (“*Walton*”).

As to **claim 18**, see e.g., FIG. 1B of *Vancraeynest*. A first base station is taught as RP1 214 and a second base station is taught as RP2 215. A first communication area is 212, a second communication area is 213 and an overlapping area is further illustrated in the figure between the areas. A first one of said terminals is taught as PSA 216 located within the overlapping region and a second one of said terminals is taught as PSB 217 located within the second region 213. As such, the first one of said terminals (PSA 216) communicates with said first base station (RP1 214) only in first time slots ($t_3 - 213$) and communicates with said second base station (RP2 215) only in second time slots ($t_2 - 232$) different from the first time slots ($t_3 - 213$), and wherein the second one of said terminals communicates with the second base station (RP2 215) in the first time slots ($t_3 - 233$). In particular, note that the mapping of a frame such as frame 228 contains four time slots: t_0 , t_1 , t_2 and t_3 . As such, each user in the figure communicates on the last time slot t_3 for their respective base station. See also column 6 with emphasis at lines 26-53.

Vancraeynest is silent or deficient to the further limitation that both a first one of said terminals and a second said one of said terminals are located within a boundary region. In particular, FIG. 1B of *Vancraeynest* only shows one terminal PSA 216.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Vancraeynest* by clarifying that both the terminals could be in the boundary region.

As such, the examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation. In particular, the motivation for modifying the reference or to combine the reference teachings would be to roam in various parts of an area including the overlapping region. In particular, *Walton* cures the above-cited deficiency by providing a motivation found at e.g., column 6, lines 63-67 where each terminal communicates with one *or more* base stations for the purpose of handoff.

As to **claim 19**, *Vancraeynest* teaches thresholds are based on handoff such that PSa 216 will have a lower quality for a threshold for originating base station RP1 212 than base station RP2 such that a second threshold is greater than a first threshold, see e.g., column 2, lines 16-44.

As to **claim 20**, see similar rejection to claim 26.

As to **claim 26**, *Vancraeynest* teaches quality metrics in general, see e.g., column 2, lines 16-44 but may be silent or deficient to the further limitation wherein the communication quality of said terminals is divided into plural communication quality classes that are different from one another.

Walton teaches the further recited limitation above at e.g., columns 22 and 23 with respect to parameters used for channel assignment. In particular, *Walton* teaches using different parameters.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Vancraeynest* by clarifying that it is well known in the art prior to applicant's invention to evaluate channels based on different parameters.

As such, the examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation. In particular, the motivation for modifying the reference or to combine the reference teachings would be to achieve a higher efficiency and performance. In particular, *Walton* cures the above-cited deficiency by providing a motivation found at e.g., column 22, lines 58-59.

Allowable Subject Matter

9. **Claims 22, 24, and 25** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

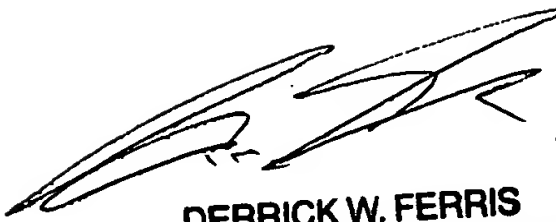
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571)272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Derrick W. Ferris
Examiner
Art Unit 2616

Art Unit: 2616


DWF

 2/17/07
DERRICK W. FERRIS
PRIMARY PATENT EXAMINER